WHERE DID IT ALL GO? ... A Chalk Talk

California's Central Valley once had four million acres of wetlands. This area has declined drastically. In the past 100 years 95% of California's Central Valley wetlands have been lost. The main cause of the decline has been the change from wetlands to agriculture. There are 100,000 acres of state and federal refuges and wildlife management areas and about 180,000 acres of private lands left in remaining wetlands.

One Mile = 5,280 feet
One Square Mile = (?) 27,878,400 ft.

One Acre = 43,560 square feet
There are 640 acres in one square mile (27,878,400 / 43,560)

QUESTION: How many acres are left in the Central Valley?
280,000 - See above

How many square miles of wetlands are left?
About 438 square miles - 280,000 / 640

This figure represents the 5% that is left.

QUESTION: How many acres were there 100 years ago?

5% = 280,000

280,000 / .05 = 5,600,000 acres

QUESTION: How many square miles of wetlands were there 100 years ago?

5,600,000 / 640 = 8,750 square miles.

QUESTION: What state is close to that size?
(Head for the encyclopedias or an atlas.)

The PROBABILITY of Pintails

Many things are possible, but the chances of some things happening are even better than that. They are **probable**. We learn about **probability** in math, and it is shown as a fraction.

2 blue marbles
1 white marble

When you reach in the marble bag the probability of getting a blue marble is 2/3. A white marble?

When we look at percentage (comparing by the 100, or **per** 100), we can also see probability. Look at the different kinds of ducks seen on one wildlife refuge:

Pintails	36%
American Wigeon	20%
Green-winged Teal	16%
Mallard	11%
Northern Shoveler	10%
Unidentified	7%

The probability of a duck at this refuge being a pintail is 36 out of 100, or P = 36/100.

DUCK SPOTTINGS

Now, use a calculator to look for ducks.

If there were 12,000,000 duck spottings (sightings), how many of them would be:

Pintails?	36/100 X 12,000,000 = 4,320,000
American Wigeon?	2,400,000
Green-winged Teal?	1,920,000
Mallard?	1,320,000
Northern Shoveler?	1,200,000